

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously presented) A method for determining a quality of an optical link, comprising:
identifying a known signal;
transmitting and receiving the signal over an optical link;
comparing the received signal to the known signal using optical correlation; and
determining a quality of signal of the optical link based on the comparison without regard to a history of transmission errors.
2. (Previously presented) The method of claim 1, wherein comparing includes correlating the received signal $r(t)$ with the known signal $s(t)$, where t represents time, using the function $c(t) = \int_{-\infty}^{\infty} s(t)r(t - \tau)dt$, where τ represents a time delay.
3. (Previously presented) The method of claim 1, wherein comparing includes optical correlation implemented in a discrete system by sampling the received signal N times, according to the function $c(t) = \sum_{k=0}^{N-1} s_k r(t - k\tau_k)$, where τ represents a time delay.
4. (Previously presented) The method of claim 1, wherein the determining includes determining an attenuation associated with the optical link.
5. (Previously presented) The method of claim 1, wherein the determining includes determining a dispersion associated with the optical link.
6. (Previously presented) The method of claim 1, wherein the determining includes determining a noise associated with the optical link.

7. (Previously presented) The method of claim 1, wherein the determining includes determining a jitter associated with the optical link.
8. (Previously presented) The method of claim 1, wherein the receiving includes sending the received signal to a delay line having a plurality of taps and the comparing includes comparing each of a plurality of tapped received signals to the known signal.
9. (Previously presented) The method of claim 1, wherein the optical correlation is completed in approximately four bit periods.
10. (Previously presented) The method of claim 1, wherein the optical correlation is completed in approximately eight bit periods.
11. (Previously presented) The method of claim 1, wherein the determining includes evaluation of a curvature of a correlation peak function.
12. (Previously presented) The method of claim 1, wherein the determining includes evaluation of a shape of a first correlation function.
13. (Previously presented) The method of claim 1, wherein the determining includes evaluation of a peak height and peak location in a correlation function over a plurality of samples.
14. (Currently amended) A method for determining a quality of an optical link, comprising:
 - identifying a known signal;
 - transmitting and receiving the signal over an optical link;
 - comparing the received signal to the known signal using optical correlation; and
 - determining a quality of the optical link based on the comparison without regard to a bit error rate associated with the optical link.

15. (Canceled)
16. (Previously presented) The method of claim 14, wherein the determining includes at least one of determining an attenuation associated with the optical link and determining a dispersion associated with the optical link.
17. (Previously presented) The method of claim 14, wherein the determining includes determining a noise associated with the optical link.
18. (Previously presented) The method of claim 14, wherein the determining includes determining a jitter associated with the optical link.
19. (Previously presented) A method for determining a quality of an optical link, comprising:
 - identifying a known signal;
 - transmitting and receiving the signal over an optical link;
 - comparing the received signal to the known signal using optical correlation; and
 - determining a quality of the optical link based on the comparison without using eye diagram techniques.
20. (Previously presented) The method of claim 19, wherein the optical correlation is completed in approximately four bit periods.